MITIGATION ACTION ITEMS – PAST DISCUSSION POINTS

	Problem Statement	Possible Action Item	Comments
1	Urban drainage flooding caused due to water backing up through the system when storm drainage system outfalls are submerged. Various locations.	Install backflow valves at outlets.	Mentioned by Town of Hempstead at January 12th meeting.
2	Lido Boulevard in Lido Beach is an evacuation rote that gets flooded frequently due to poor drainage. Also an issue with drainage from under the school. Part of road lower than storm drain system.	Study the area in detail to determine the best mitigation solution.	Mentioned by Town of Hempstead at January 12th meeting.
3	Recharge basins overgrown or undersized; causes flooding. Various locations.	Perform regularly scheduled maintenance/upgrades. **Note- routine maintenance is not an eligible type of "mitigation" project for funding under most FEMA programs.*	Mentioned by Town of North Hempstead and NYSDOT at January 12th meeting.
4	NCOEM mentioned that some of LIPA's substations may need to be mitigated (elevated/floodproofed/ etc.).	LIPA can evaluate substation critical elevations versus flood heights and identify facilities most in need of mitigation. If LIPA requests, NCOEM could support LIPA by applying on their behalf for federal/state mitigation project funding.	Mentioned by NCOEM at January 12th meeting.
5	Flooding due to storm drains backing up. In some cases due to lack of maintenance. In other cases systems are undersized due to increased development. Various locations.	Perform regularly scheduled maintenance/upgrades. **Note- routine maintenance is not an eligible type of "mitigation" project for funding under most FEMA programs.*	Mentioned by Town of Hempstead and NCOEM at January 12th meeting.
6	LIPA poles- will they withstand heavy flooding events?	LIPA could evaluate whether existing poles will likely withstand heavy flooding events, and whether installing poles to a greater depth would mitigate.	Mentioned by NCOEM and Town of Hempstead at January 12th meeting.
7	Flooding in Morgan Island in Glen Cove includes areas where sewage lift stations are located.	Evaluate whether electrical components can be moved to higher ground to mitigate the problem.	Mentioned by Glen Cove at January 12th meeting.

8	East Island in Glen Cove has 6,800 ft of shoreline on the Long Island Sound and 4,000 ft of shoreline on Dosoris Pond; it is vulnerable during severe storm occurrences and has approximately 140 homes. Several streets subject to tidal flooding and storm surges, impacting City services and requiring evacuation.	Study specific problem areas in more detail to determine the cause(s) and best mitigation solution(s) to protect these low-lying areas and the roadway system.	Provided through Glen Cove DPW to NCOEM, June 2006.
9	East Beach Road, Prybil Beach, in Glen Cove. Services City beach and provides emergency access to East Island and Dosoris Island. Serves also as part of emergency route when Danas Island Highway is closed.	Consider raising the road to an elevation sufficient to allow for safe emergency access during a 50-year storm event.	Provided through Glen Cove DPW to NCOEM, June 2006.
10	Southland Drive, East Island, in Glen Cove. Southland Drive is one of two main east-west roads on East Island and is primary emergency route off island if west exit along Danis Island Highways is impassable. Pipe outlets at point of discharge in Long Island Sound from Southland Drive and Eastland Drive are in need of valve control. During storm tides and surges the system becomes clogged with sand and becomes non-functional, causing inland flooding and overflow into Dosoris Pond.	Consider valve control at outlet.	Provided through Glen Cove DPW to NCOEM, June 2006.
11	Southland Drive sanitary sewer pump station on East Island in Glen Cove – lift station services east end of East Island. Extreme high tides and storm surges flood station, disrupting power causing the station to go off line possibly interrupting service to residents and resulting in raw sewage overflow to Dosoris Pond.	Consider retrofitting station for submergible operation as well as emergency power generation.	Provided through Glen Cove DPW to NCOEM, June 2006.
12	Dock Place sanitary sewer pump station on East Island in Glen Cove – lift station services west end of East Island as well as inflow from Southland Drive lift station. Extreme high tides or storm surges flood this station causing the station to go off line which results in raw sewage overflow to the Long Island Sound.	Consider retrofitting facility for submergible operation in addition to emergency power generation for continuous operation during electric power outages.	Provided through Glen Cove DPW to NCOEM, June 2006.
13	Danas Island Highway, Dosoris Island in Glen Cove – connects Dosoris Island and East Island to the mainland. Only road connecting islands to mainland. Subject to tidal flooding and storm surges which isolate both islands from the mainland. City services are impacted and evacuation is necessary.	Consider raising the road for a 50-year storm event.	Provided through Glen Cove DPW to NCOEM, June 2006.
14	Hewlett Harbor – urban flooding (storm drains) during October 2005 heavy rainstorms.	Storm drain board is evaluating capital projects to mitigate similar impacts during future heavy rain events.	Provided by Hewlett Harbor to NCOEM, March 2006.
15	Great Neck School District – Flooding at Cumberland School, 30 Cumberland Ave, Great Neck, due to storm water and lack of adequate drainage.	Study specific problem areas in more detail to better define the cause(s) and best mitigation solution(s).	Provided by Great Neck School District to NCOEM, March 2006.
16	In Lido Beach on Lido Boulevard between Greenway Road and Regent Drive – rainstorms during high tides cause severe flooding, reducing the road to only one lane (for example during the October 2005 heavy rainstorms) and causing roadway closure. Lido and Point Lookout Fire has not been able to determine why this is happening or how to correct the problem.	Study specific problem areas in more detail to better define the cause(s) and best mitigation solution(s).	Provided by Lido and Point Lookout Fire District to NCOEM, December 2005.

17	NYSDOT notes drainage problem areas in Nassau County – see separate handout.	For discussion at June 6, 2006 meeting. Priority should be given to mitigating problem areas located along evacuation routes, particularly in the southern portion of the county where storm surge is an issue and evacuating populations are highest.	For discussion at June 6, 2006 meeting.
18	Shelters - NCOEM currently has a tracking system in place for hurricane sheltering in the County. At this time, shelters have been predesignated per American Red Cross Publication #ARC-4496. As per the 1993 Hurricane Evacuation Study, the ARC and County have reviewed surge mapping and will only open shelter located outside of any potential hurricane surge flooded area. It was recommended that studies be conducted to determine wind resistant design level for each facility but at this time, only one has been completed.	Seek grant funding to conduct studies of the shelters to determine the winds they each would withstand and then to seek funding for mitigation (hardening, shutters, hurricane clips, etc), possibly for the ones with the greatest capacities first.	Provided by NCOEM.
19	1993 Hurricane Evacuation Study notes first floor elevations for institutions and medical facilities with regard to potential storm surge heights. Some facilities have first floor elevations that could be flooded for Category 1 and higher; many facilities have first floor elevations that could be flooded for Category 2 and higher. Various facilities in Long Beach, Island Park, Inwood, Woodmere, Hewlett, Valley Stream, East Rockaway, Lynbrook, Rockville Centre, Oceanside, Baldwin, Freeport, Bellmore, Seaford, and Massapequa.	Conduct detailed evaluation of the site and specific construction details of the facilities. Identify feasible mitigation alternatives. Fund the most cost-effective alternative (or seek grant funding if needed). Initiate mitigation projects when funding is secured.	For discussion at June 6, 2006 meeting.
20	Some jurisdictions with mapped landslide hazard areas of High Susceptibility –Low Incidence have adopted Steep Slope Ordinances with development standards for these areas; other jurisdictions have not.	Nassau County could hold one informational meeting with jurisdictions who have not adopted steep slope ordinances to describe what they are, and provide samples of steep slope ordinances from other Nassau County communities.	For discussion at June 6, 2006 meeting.